Abstract Title: Windscreen washer system with rainwater collection

A vehicle windscreen washer system comprises a washer bottle that is replenished using rainwater collected from the vehicle. The system may collect water when the vehicle is stationary, or when the vehicle is in motion. The system may also comprise an auxiliary tank into which water is directed, the water being directed through a feed pipe and a filter, a valve which prevents collection when the vehicle is in motion, a temperature sensor to read the temperature of water in the auxiliary tank, a heater to defrost water in the auxiliary tank, a conventional washer bottle, and a pipe, filter and pump arrangement to transfer water from the auxiliary tank to the washer bottle.
Not to Scale Rough Outline Drawing of
"Screen Clear Auto Fill Auxiliary Tank"

Feeder Pipe from Lowlake Screen Run OFF
for Raw Water

Hinge to Open Tank
For Service Cleaning

Auxiliary Tank

Temperature Detector

Transfer Pipe Filter

Heater Coil for De-FOSS

- Feed Filter
- Auto Shut Off Valve
Open Only When Vehicle is Parked

Electric Transfer Pump to Feed
Standard Washer Bottle. Activated
By Low Level Switch in
Standard Screen Washer Tank
I propose the following for patent.

"Screen Clear Auto Fill Auxiliary Tank."

Rain Water collection system from the windscreen of a motor vehicle when parked.

This water is to be filtered before being rooted to an auxiliary water tank to be situated where a manufacturer chooses. This tank is to be of appropriate size for the vehicle. A small heater is suggested to be activated if the content are at 0 degrees C to stop any freezing problem when the vehicle is in motion.

A transfer pump will be activated (if auxiliary tank fitted) by the low level switch on the normal washer bottle tank. The transfer pump when activated will transfer the caught rain water to refill the normal washer bottle tank.

We suggest that when the transfer has taken place information is given to the vehicle operator that the operation is completed but washer bottle additive should be added as soon as possible.

The rain water feed to the tank from the screen drainage canals should be opened when the vehicle is locked and parked only. A filter above and below the valve should be in place and be cleaned at normal service intervals as should the tank to reduce the risk of any build up of Algae or other organisms. Rain water can be collected from other areas that are deemed to be suitable such as from sun roof gunnels as a manufacturer sees fit and appropriate to the design of the individual model of motor vehicle.

The same system for the second hand motor vehicle market should be made available with a flexible bag / tank for ease of fitting on a DIY bases.

Drawings of the basic function of the unit are enclosed which give a general over view of the planned system. They are done this way as the system is expected to be adapted to the individual manufactures make and model of motor vehicle.
Claims

1. A self-filling water washer bottle fitted to any vehicle that uses windscreen wipers to wipe the windscreen.

2. A self-filling water washer bottle to claim 1, in which the bottle is filled with rainwater collected when the vehicle is stood stationary outside.

3. A self-filling water washer bottle to claim 1, in which the washer bottle is filled with rainwater while the vehicle is in motion.
**Patents Act 1977: Search Report under Section 17**

**Documents considered to be relevant:**

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<th>Category</th>
<th>Relevant to claims</th>
<th>Identity of document and passage or figure of particular relevance</th>
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<td>GB 767902 A (TRICO) Whole document</td>
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<td>US 3738575 A (SOMER) Whole document</td>
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**Field of Search:**

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC:

Worldwide search of patent documents classified in the following areas of the IPC:

B60S

The following online and other databases have been used in the preparation of this search report.